

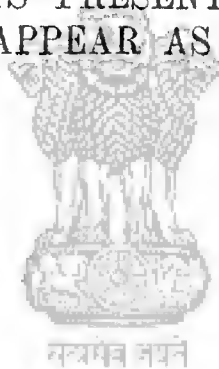
# INDIAN UNIVERSITIES COMMISSION.

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## UNIVERSITY OF MADRAS.

### PART III.

WRITTEN STATEMENTS PRESENTED BY PERSONS WHO  
DID NOT APPEAR AS WITNESSES.



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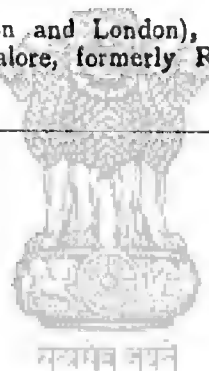
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1902.

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THE RIGHT REVEREND H. WHITEHEAD, M.A., D.D., Bishop of Madras.

*A.—Constitution of the Senate and Syndicate.*

It does not appear that there is any great demand for reform in the constitution of the Senate and Syndicate in the University of Madras. In Calcutta on the other hand much dissatisfaction has been felt in past years that the government of the University has been so largely in the hands of persons not themselves engaged in education. It would be desirable, I think, that the Senate of an Indian University should be a much smaller body than at present, consisting mainly though not exclusively of persons actually engaged in education. A Fellowship should be held on condition of a certain percentage of attendances at meetings of the Senate during a period say of three years.

*B.—The functions and work of the University.*

It will be convenient to deal with the question of the reforms most needed in the practical work of the University under three heads. There are, I think, three main defects in the work of our Indian Universities which urgently need reform.

*I.—Differentiation of Functions.*

The first is that the Universities now attempt to combine two widely different functions. On the one hand, they endeavour to give what I may call a commercial education to a large number of young men who are destined to work as clerks in Government or Mercantile Offices or to take posts as schoolmasters on salaries of about Rs20 or 30 a month and do work that is rather below than above the work of National School Masters in England. This class of students, who constitute by far the majority of the students of an Indian University, are not fitted to receive a University education nor is the education they receive at the University suited either to develop their powers or to prepare them for their work in life.

Then, on the other hand, the University aims at giving a really high education to a small body of able and thoughtful students.

These two functions are quite incompatible, and the result of attempting to combine them is a comparative failure in both. The general body of the students who need a "Commercial" education are obliged to study subjects unsuited to their capacities; and at the same time the teaching and examining of the small body of really able students is fatally hindered and degraded by the effort on the part of the teachers and examiners to suit their methods to the majority of the students. I do not think that I am exaggerating when I say that in every class of 100 B.A. students at least 60 are unfitted to receive a University education. But as they are in the class the lecturer must of necessity teach down to their level. No great improvement, I believe, is possible in University education, unless this state of things is remedied, and the University students proper are separated off from the rest.

The simplest way to deal with this evil, I think, would be to make the

\* Or the F.A. might be abolished and a new examination instituted for those who are not University students. Students preparing for this examination would not be required to pass the Matriculation Examination first.

F.A. \* Examination altogether distinct from the regular University course, so that after passing the Matriculation Examination a student could either go up for the F.A. or begin at once to study for the

H. M. B.A. I would then make (a) the F. A. a two years' course and adopt the subjects and examinations to the needs of those who are destined for work as clerks in offices or other professions which do not require a University Education, (b) the B.A. a three years' course from the time of Matriculation with no other examination intervening, and (c) the M. A. a two years' course from the time of passing the B. A. Examination. I would also make the B.A. honour course entirely separate from the ordinary B. A. pass course, with different books and subjects.

In thus re-organizing the University course the objects in view would be :—

- (i) The reduction of the number of examinations for the B.A. students.
- (ii) The separation of the honour course from the pass course in the B.A.
- (iii) The provision of greater facilities for specialization in the case of B.A. honour students.

### *The Universities, Teaching Bodies.*

If these changes were made or changes on similar lines, I should be in favour of the University becoming a teaching body for the honour B.A. and M.A. students. It would, I think, be a great advantage for the ablest students to receive their education at the head-quarters of the University where they could have access to good libraries and be taught by a body of University professors who would devote themselves entirely to their tuition. The mofussil colleges cannot afford to set aside a number of highly paid professors for the teaching of their best students, and in the interests of higher education it is very desirable that this important part of the teaching work should be undertaken by a body that has adequate funds at its disposal.

### *II.—Improved teaching of English.*

The second defect which tends to hinder the work of the Indian Universities is the faulty method of teaching English that prevails in schools.

All the teaching in the University course pre-supposes a good knowledge of English and the students cannot master the subjects they study, unless they have a thorough command of the English language. The burden of thinking and getting up new subjects in a foreign language is in any case heavy : and it crushes all power of original thought out of any student who attempts to bear it without having first mastered the language in which he has to think. A good knowledge of English therefore is essential as the necessary foundation of a University education : and the foundation must be laid in the schools. But the only way to secure a sound knowledge of English in the schools would be for the boys to be thoroughly drilled for some years in translating from their Vernaculars into English and *vice versâ* both on paper and *vivâ voce*. This, I believe, at present is rarely done. But the Universities could insure its being done by giving much more weight in the Matriculation Examination to translations of passages from the vernaculars into English and *vice versâ*.

The Matriculation Examination might with advantage be simplified especially as regards the English part of it, which should be directed solely to testing a student's knowledge and command of English and not his knowledge of queer phrases and allusions in a text-book,\* or grammatical puzzles.

\* There is no text-book for the Matriculation Examination in the Madras University : but in the papers far too much weight is given to grammatical difficulties. Students get up "cram" books to answer the general English paper, I am informed.

H. M.

### *III.—Permanent Moderators.*

A third defect is the want of a permanent staff of skilled examiners or moderators in the various branches of study.

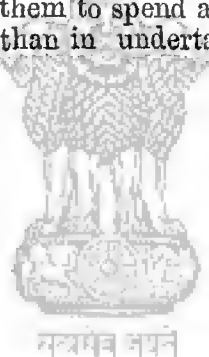
Examining is an art requiring special qualifications and careful and constant study. If a man is to examine well he must give a great deal of time to the setting of the papers and the consideration of the effect, which particular questions will have upon the methods of teaching. It is most important therefore that this work should be done by experts who can give ample time to it. Examining is the main function of the University and if this is done badly the failure must react disastrously on the teaching of all the colleges. The constant complaints made by responsible heads of colleges with regard to both the questions set and the vagaries of examiners in looking over the papers of the candidates, seem to show clearly that in this important department of University work there is urgent need of reform.

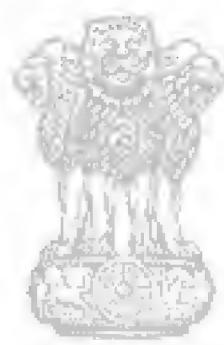
The main difficulty that arises in dealing with this problem consists in the fact that while, on the one hand, it is not desirable that the examiners should actually be teaching the subjects in which they set questions, on the other hand

the only persons who are really competent to examine in many subjects are the men who are engaged in teaching them. In India there is no reserve of able and learned men, not engaged in education, with leisure to examine.

I would suggest the possibility of appointing in each subject a highly paid moderator, to act as Chairman of the Board of Examiners in moderating the papers set, and to test carefully the results of the examiners who look over the papers. At present the Board of Examiners in each subject is supposed, I believe, in most Indian Universities to moderate the papers set. But it is impossible for this to be done properly by a body of men who have a hurried meeting to look over a large number of question papers which they have not seen before. A paid Chairman would have the duty of making himself thoroughly acquainted with the kind of questions that it would be fair and desirable to set, of carefully studying each question paper before it was brought before the Board, and of explaining to the Board the objections he might have to any particular questions or any paper as a whole. So too he could thoroughly test the results of each examiner and where he found them defective, refer the papers to either a Standing Committee of the Senate appointed for the purpose or to the Board of Examiners.

If the Entrance, F.A., B.A., and M.A. Examinations could be fixed at different times so as to spread over the year, a paid moderator in any one subject would be fully employed for the whole year moderating the questions and results of the various examinations, and could give his whole time to the work. Considering the great importance of a thorough, accurate and scientific system of examination as the main work of the Universities, I am inclined to think that it would be at present better for them to spend any spare funds at their disposal in perfecting their examinations than in undertaking any additional functions as teaching bodies.





सत्यमेव जयते

Dated the 15th February 1902.

From—W. E. HOARE, Esq., M.A. (Oxon.), B.A. (London), Principal, Doveton College, Madras, Fellow of the Madras University,

To—The President, University Commission.

I HAVE the honour to lay the following views before the University Commission. At the time of writing I have at hand no report of the Syndicate of the Madras University later than that of 1900-1901. All figures are quoted from that report. Nothing has since happened to modify those figures to any material extent.

1. *Constitution of the University.*—I see that it has already been pointed out that the Senate is too large. Far too many Fellows have been appointed as a mark of favour, apart from educational fitness. The evil is more apparent than real, since the alterations of the syllabus, etc., are left principally to the educational men, but at the annual meeting for the election of the Syndicate, etc., there is a very large attendance. The evil of appointing a needlessly large number of Fellows dates from 7 or 8 years back :—

In 1896 . . . . .	18 were appointed (at least).
„ 1897 . . . . .	20 „ „ „
„ 1898 . . . . .	25 „ „ „
„ 1899 . . . . .	20 „ „ „
„ 1900 . . . . .	14 „ „ „

Of these, and I include myself, a large number cannot be considered highly qualified to deal with University affairs. Others, better qualified, might have waited a few years.

2. *The Syndicate.*—This is elected annually by the Senate. The leading Government officers usually and naturally find a place on it. It is a somewhat sluggish or somnolent body, but since the majority of its members are re-appointed, and since the election is free, it cannot be said to have failed to please the majority of the Senate.

3. As regards colleges, there are many needed changes. Affiliation is at present a merely nominal bond, and, like the Fellowship, is bestowed too widely. The 1901 calendar shows 40 second grade, 15 first grade colleges, besides special colleges.

In 1900, 2,138 in all appeared for the F.A. Making no deduction for non-collegiate students, this gives an average 49 per college, which at first sight seems to indicate a college of fair strength, but Table IV, p. 29 of the Syndicate's report, 1900-1901, shows—

Colleges sending over 200 candidates . . . . .	1
„ „ 100 to 200 „ . . . . .	0
„ „ 50 to 100 „ . . . . .	10
„ „ 25 to 50 „ . . . . .	15
„ „ 10 to 25 „ . . . . .	17
„ „ under 10 „ . . . . .	11

It is certainly a matter of debate whether the last two divisions—more than 50 per cent. of the colleges—can be said to be colleges or places of higher learning in any sense of the word.

Of the above 2,138 students, 356 were private candidates, leaving 1,782 candidates from colleges. Now practically every member of a senior F.A. class goes up for the F.A. Hence allowing for illness, etc., there are about 1,800 in the Senior F.A. class. The number in the Junior F.A. class would be about 1,200.

Dividing these figures by the number of colleges we get average college strength to be—

Senior F.A. . . . .	33
Junior „ . . . . .	22

It can, I think, be hardly doubted that the real interests of education would be furthered by a *diminution* of colleges and a concentration of students into

fewer but larger and better equipped institutions. The policy of urging the conversion of strong high schools into second grade colleges was begun by H. B. Grigg, Esq., once Director of Public Instruction. Year by year the Director has complacently noted the increase of colleges and has not apparently perceived that an increase of weakly institutions is no gain to the cause of education.

In these days of railways, hostels, etc., there is less need than ever for a multiplication of small colleges. Once a champion of second grade colleges, I am now a convert to the opinion that they are as a rule a mistake. The candidates who pass the F.A. from them have to join a first grade college for their degree studies. This being so, the student had better join the first grade college after matriculating and pass both his examinations (F.A. and B.A.) from the same college.

The evil is accentuated when two weakly colleges compete for the available students in a small town. Tinnevely, Cuddalore, Coimbatore, Mangalore,—all have two colleges. This must lead to a lack of discipline and to that insane competition in fee cutting, which, with the Honourable and Rev. Dr. Miller, I deplore as the bane of aided education.

The supply of colleges should be rigorously limited to actual needs. People should not be encouraged to open second grade college just because they would like one.

The promoters of a new college have to satisfy the Syndicate of the financial stability of the proposed college. The Director has recently spoken at Coimbatore of the necessity of endowments. I would make it a condition henceforth that before any new college is affiliated, it should have an endowment of at least Rs50,000. If a college were really needed this would be raised.

Of the first grade colleges, 15 in number.

2	sent up more than 100 candidates for B.A. English Language.
2	„ 50 to 100
5	„ 20 to 50
4	„ 10 to 20
2	„ under 10

These figures would seem to show that about 10 first grade colleges and 25 second grade college departments (which may be in most cases identical with first grade colleges) are thriving.

In fact from the Syndicate's report, only about 12 purely second grade colleges seem to have F.A. classes sufficiently large to justify their existence.

I recommend (1) that F.A. candidates who have failed be required, as in the case of those who fail at Matriculation, to return to college; (2) that the numbers of those obtaining 'exemption' be greatly reduced. The figures are instructive. In 1900 out of 7,313 examined for Matriculation, 6.9 per cent. of 1,860 'private study' candidates passed; 23 per cent. of the 5,453 school candidates passed. The large total of private candidates (1,860 examined, more than 25 per cent. of the total) and the very low percentage of passes among them seriously affect the general results of Matriculation.

			Per cent.
December 1900.	School candidates examined 5,453	passed 1,266	23.2
	Private „ „ 1,860	„ 130	6.9
	<u>7,313</u>	<u>1,396</u>	<u>19.5</u>

All *bonâ fide* teachers, clerks, etc., should receive exemption, but boys should not receive exemption merely because they are 18 or even 20, when the effect of exemption is that they stay at home. They should be at school.

4. *Examinations*.—I agree in thinking with Dr. Miller that Matriculation arrangements are not satisfactory. But this is not due to the large numbers. The Cambridge Local Examination authorities and the College of Preceptors apparently handle larger numbers with success.

Too many examiners are employed, and many of inferior quality. This year there were 7,777 Matriculation candidates. I valued 1,711 papers myself. Two others did nearly as many. Clearly five men working on this scale would



clear the lot in one subject easily. I may say the average mark per candidate of the three men referred to was within '2, identical. But under us were a number of men, natives, who had, I suppose, 500 or so papers each. There came in the difficulty. One man marked a paper 31: the three chief men lowered it to 19. One man gave 27. I, who am reckoned strict, gave 42. Imagine scores of cases where the revaluation gave results differing by numbers ranging from 6 to 10, recollect the numbers of boys whose marks come near—above or below—the passing mark. Is it any wonder that the Matriculation results are, by those best qualified to judge, considered untrustworthy? Fewer and better examiners must be employed. The University has ample funds, and if the best men do not find the present terms attractive, the terms must be raised. I cannot say that the Syndicate has made the best even of the present state of things. I do not think that sufficient attention has been paid to the rule that graduates of less than 10 years' standing should not be nominated as examiners. Those who could have examined well have been left out in the cold, while the incompetent have been taken on—no doubt in inadvertence. Graduates and principals of mofussil schools have been at a great disadvantage. With care and proper organization even a big thing like the Matriculation can be managed properly.

5. I am in favour of the following:—Government no longer to accept University examinations as gateways to Government service. The Matriculation breaks down hopelessly in its endeavour to satisfy the threefold purpose of (1) an entrance to a University course, (2) passport to Government service, (3) school-leaving certificate. If three separate examinations were instituted for these purposes, I have no doubt there would be an all-round gain, but the smaller high schools might suffer and much opposition would be raised. At present Government says—"Oh! you must have science in your high school course." Now for University purposes many would propose to simplify Matriculation by dropping Science and increasing the Science in the F.A. This illustrates the disadvantages of the present system. Too often a boy leaves school from the VI Form with a smattering of everything. A school-leaving examination should rather require him to know two or three things well.

6. *Science Degrees.*—I am in favour of examinations for a B.Sc. degree as proposed, and for an M.Sc. degree, which has not been proposed. If these are instituted I do not see the necessity of keeping the Science subjects, *at least to their present standard* for the B.A. Those who want that standard should go to the B.Sc. I should be inclined to drop the Language Division of the B.A., to substitute a fairly easy Science standard rather higher than F.A. Physiology and have for Branch III a choice between Mathematics, History, Philosophy, with alternative courses in each.

7. I do not see the necessity of *honour courses*. The advocates of these seem to be seeking too close a correspondence between our courses and those of Oxford, Cambridge or London. Is there among students any desire for an honours course? I think not. Further, without present resources in the way of professors I doubt if a college would cope with the increased work. Now a B.A. class contains say 60 pass men. An honours course would divide it into 50 pass men at least, and from 6 to 10 honours men. Much extra work would thus be entailed and an increase of staff required. The true course seems to me to coax promising graduates to take the *M.A.* Something is being done by scholarships, but apparently even promising B.A.'s turn off to the B.L. or to Government service. If Government could reserve one or two posts annually for M.A.'s only, this might be an inducement.

8. Again joint lectures might be provided either by the colleges, or by the employment of college men as *University Professors*. I fear, owing to geographical reasons, joint college lectures for the F.A. and B.A. are practically impossible, but the M.A. course would give a chance for the establishment of such lectures. The field is at present scarcely occupied, only a little tutorial oversight being given to M.A. candidates in one or two of the largest colleges.

- (a) There would be no difficulty in causing M.A. students to attend the Presidency College on one day for a lecture, the Christian College on another, Pacharyappa's on another; or
- (b) The University might elect as University professors the best men available and institute Saturday lectures to M.A. or even to B.A. students *in certain subjects*. The University can afford this;

individual professors would not be heavily taxed if asked to deliver say 15 lectures per year. Three professors to one branch would thus mean 45 lectures for one branch. This in addition of course to their regular college duties from Monday to Friday. The distinction between a teaching University and a mere examining body is more apparent than real. The affiliated bodies teach. But enough has been said by others on this point. Suffice it to say that in the scheme above outlined the demands of those who cry out for a teaching University would be met and the experiment might lead to further developments.

9. I think Mr. Sathianathan's wish for extensive lectures has been formed in complete forgetfulness of the conditions at present obtaining in Madras. Education must be more widely diffused and there must be more scholars of means and leisure before such a scheme can be contemplated.

10. *University finance.*—Suggestions already made would do something to remedy what I think is nothing less than a scandal—our huge credit balance of Rs. 3,96,337 on 31st March 1900. The University in this bears too close a resemblance to a commercial company with a large reserve fund available for dividend. I have already indicated ways in which *at least* the *interest* on the balance might be spent. The University should spend largely in modernising and adding to its library. Somebody—Government, or the University, or private effort—should commence an art gallery, a means of education almost totally neglected. The two latter sources having failed, Madras might imitate Oxford in providing University art galleries.

11. I am opposed to age qualifications for University examinations for the reasons already given you by others. (1) Some don't know their age; (2) the brightest students are the youngest. They do not apparently suffer through being pushed on. (3) Fraud would be practised.

12. While anxious to stop competition by fee cutting I fail to see how a fee notification would avail. The fee notification was notoriously evaded. In this evasion managers and pupils fell to far greater depths of ignominy than under the present system of open competition. The only way to enforce fee notifications is to make such rigorous conditions of aid, affiliation, etc., as to compel every manager to receive every possible fee of income. But here again those managers who pay salaries on one scale and draw grants on a much higher scale will always be at an advantage. I am alluding of course to religious brotherhoods.

13. I find that under 'affiliation' I have omitted to say that not only are colleges too numerous but that the affiliation tie is of the weakest. Conditions of affiliation appear on paper. In practice few are rigorously applied. No inspection of an affiliated college by a University Inspector has yet taken place. In fact there is a vicious circle of non-responsibility in these matters. The Government inspection of a college is perfunctory in the extreme and is little better than a farce. On the other hand, the Department judges very largely indeed by successive University examinations. The Government therefore relies on the University doing its work of examination properly. In its turn the University seems to trust to the Government inspection, inasmuch as it has not yet appointed any Inspectors of its own. The University has funds and should be able to arrange, when it saw fit, for inspection of colleges by *two* Inspectors at no great cost. Owing to the difference of seasons for example, men travelling to or from the hills for their summer holidays would pass through or near towns with colleges at work. It could be arranged for two men to stop at such places and inspect the colleges. I mention this simply as an illustration of what might be done and as a reply to those who contend that inspection would be very expensive. Managers and principals can, if they like, take things easily. The conditions of affiliation ought to exact strenuous activity, and defaulting institutions should be more strictly dealt with. There are institutions, the examination results of which have for years been bad—notoriously bad. Yet they are still recognised. No one, of course, proposes to punish schools for occasional or temporary failure.

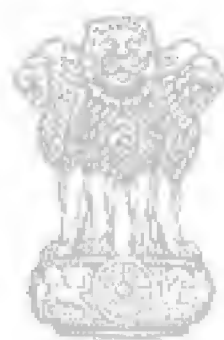
14. To one other point I attach great importance. I have reason to believe that too many managers engage a Science graduate, to teach Physiology or

chemistry and then believe that all is well. With exceptions Science graduates shirk unpleasant experiments. I have in mind a college where for years no attempt to illustrate Physiology has been made. Also I have found among college students those who evidently in Matriculation classes saw few or no experiments. Unfortunately the average Government Inspector is not competent to examine these subjects and does not find out these shortcomings. In my opinion there are few points which deserve such severe punishment as these. I could in fact cancel the affiliation of any college where Physiology was taught by book work alone.

I think I could devise a plan by which every F.A. candidate could be made to satisfy some *simple* practical test in the optional Science subject. The test could be such that the local superintendent could himself apply it, even if ignorant of science, and the written results could be forwarded to the chief examiner for valuation.

15. I am entirely opposed to any scheme for lessening the number of Matriculation candidates (or for doing away with it altogether) by any system that would impose on headmasters of high schools the duty of issuing certificates of fitness for entrance on a University course. The present state of things shows that headmasters are as a whole unfit to discharge this duty. Every year hundreds of boys are certified by them as fit to enter on a University course, who yet fail in all subjects, in four, or in three. In 1900 in 5,890 failures in Matriculation 718 failed in *all* five branches, 1,118 in four, 1,207 in three. Comment is needless. If the plan I object to were carried out, our colleges would be crowded with thousands of incompetent scholars. It must be borne in mind that headmasters of mofussil high schools, particularly of municipal or local fund schools, dare not in these matters be independent. They have to satisfy the demands of a ruling clique. Hence the whole system of promotion is very unsatisfactory, and for this reason I am so far from joining the vast majority in condemning the lower secondary examination, that I hail such an examination, *if rightly conducted*, as a valuable *independent* test of a boy's fitness to enter on a high school course. I would in fact allow no boy to enter Form IV who could not pass a simple but searching public examination. Whether the curriculum of the lower secondary department and, by corollary, whether the lower secondary examination are suitable is another question that does not concern us at present. My point is that properly conducted public examinations are necessary to sift out those boys who are fit to enter the high school department and those who are fit to pass thence to a college. Large Madras institutions of course conduct their own school examinations properly and the management is not susceptible of pressure, but I fear our leading exponents of educational policy scarcely bear in mind the condition of things in small mofussil schools, where the teacher's position is by no means independent.

I find that on the great majority of points I am in agreement with Father Sewell and the Rev. E. M. Macpharl. I have written these notes in great haste and they will reach the Commission at the eleventh hour. I have had no time to attend to expression, and I am sorry that I could not place them before you earlier, but I trust that my views are clearly expressed, and that as far as they go, they will be of service.



सत्यमेव जयते

Dated the 17th February 1902.

From—W. M. ZUMBRO, M.A., B.D., Principal, Pasumalai College, and others,

To—The Honourable C. SANKARAN NAIR, Indian Universities Commission, Madras.

In accordance with your favour of the 8th instant I circulated your letter among the teachers of the Pasumalai College and High School, the Training Institution and the Practising branch, and later called a meeting of all the teachers in order to consider such matters as we might wish, through you, to bring to the attention of the Commission.

The teachers were practically unanimous on the following points :—

(1) If by “making the University a teaching body” is meant to provide for students who wish to continue their studies beyond the B.A. course by doing original research work, we are strongly in favour of that idea.

(2) With reference to the question of Fellows, we are of opinion that it would be well to give to the heads of all affiliated colleges some voice in University affairs, whether they are Fellows or not.

(3) With reference to the University Examinations we believe that both teachers and students are generally led to believe those things to be most important which are most emphasized in the examination papers and that therefore any paper which deals largely with minute details and unimportant exceptions tends to compel teachers to give their time to such things rather than to the more important principles. Some arrangement therefore by which the setting of papers could be put only in the hands of experienced experts who would have in mind the most important principles of any subject is desirable. The question paper very largely determines the ideal which the teacher has in mind throughout the year.

With reference to these examinations we also feel that it is manifestly unfair for any examiner to set a paper in any subject which he has taught during the year. Whether rightly or not many students in the mofussil firmly believe that it will be a great advantage for them to go to some one of the leading colleges of Madras, because as they say their instructor there is also their examiner, and so they are much more likely to pass in the examination. This idea in the mind of the students works to the disadvantage of the mofussil colleges.

It is suggested that it might be a better arrangement for examiners in one University to examine the candidates of a neighbouring University.

(4) Another instance in which mofussil colleges are placed at a considerable disadvantage is in the fee list prescribed by Government. Mofussil colleges are expected to charge the same rate of fees as that prescribed for Government colleges and for colleges in Madras, or at any rate, Government in considering any application for grant on teachers' salaries always estimates the fee income at the full Government rate for the number of students on the rolls, and only consider grant with reference to any deficit that may arise after such estimated income has been deducted from the total cost of the institution, and in case the deficit thus left is not appalling Government usually remarks that if more money is needed, the fees should be raised.

Now we believe that it is manifestly unfair to expect all colleges in the mofussil to levy the same rate of fees as can be successfully demanded in Madras and other large centres. The cost of living is in nearly every way cheaper in the mofussil than in Madras and the same conditions which control this matter in other affairs also control to a certain extent the amount that can be charged for instruction. This does not mean that the instruction given in mofussil colleges is of an inferior grade, but that equally good instruction can be secured at a less cost. It would, therefore, seem fair that all that can be expected of mofussil colleges is that the income from fees in such colleges should meet as large a proportion of the total cost of the institution as the proportion met by fees in the colleges in Madras, and that mofussil colleges should not be refused grants for teachers' salaries because the rate of fees levied is not up to the standard of Government colleges or other colleges in Madras.

Thanking you for this opportunity.



सत्यमेव जयते

Dated the 17th February 1902.

From—MR. V. KRISHNAMA CHARAN, a Pensioned Educational Officer of Government,  
Office of the Registrar of Books, The Old College, Madras,

To—The President of the Universities Commission sitting in Madras.

THOUGH not asked to appear as a witness to be examined before your Commission, as I was by the Education Commission of 1882, yet I learn from the Circular published in the newspapers that it is open to any person to submit information in the form of a written statement. May I therefore offer the following remarks on the condition and needs of the Madras University and suggest for consideration what, in my humble opinion, would promote the advancement of learning on sounder and more healthy lines. My opinion is based on my experience of 45 years' work in the Educational Department first in connection with the School Inspectorate and next with the Book Branch, and of my service as Fellow of the University since 1872, especially in the capacity of Member and Chairman of its Board of Studies in the Dravidian Languages and as one of the Examiners and Editors of Text-books in some of those languages, to say nothing of my having been in touch with Pachaiyappa's College and Schools and a few Sanskrit seminaries. The following suggestions are therefore the result of my long and varied experience gained during the best part of an active lifetime spent in connection with education and literature of all kinds in this part of India :—

(1) The Madras University being merely an examining body, the first reform needed has reference to the agency of examiners. There is a general feeling that certain colleges are too largely represented in the Examination Boards, and this has given rise rightly or wrongly to suspicions of partiality and leakage of question papers, to say nothing of the impropriety of appointing any professors or teachers directly engaged in teaching and examining their own pupils in their particular subjects. Such preponderance of one kind of element in the Boards of Examiners is not in consonance with the spirit of the Act of Incorporation, and instances are not wanting of appointments of most of the Professors, especially of individual Arts Colleges and their assistants and old students year after year, to the disadvantage of other colleges. To restore the respect and confidence of the public in the University Examinations and to avoid the embarrassing enquiries caused by doubts felt and proclaimed in the columns of the local press as to the proper conduct and credit of the University Examinations in general, the old method of appointing, as far as practicable, competent Fellows and scholars not directly engaged in teaching the particular subjects of a collegiate course is to be preferred.

(2) It is generally believed that the time is come for extending the scope of the University by making it, partially at least, a teaching body, especially in Philosophy and Science. Lectures from eminent British graduates, highly trained specialists qualified to lecture on the higher branches of these subjects as living things which have a direct bearing on life, are very much needed to give a deep tone and reality to the teaching of under-graduates ; but the affiliated colleges cannot be expected to bear all the pecuniary burden of carrying out a scheme of this nature with their limited resources. Knowledge is often presented nowadays to students as something of mere words and phrases which they have only to learn by rote for a *pass* examination, and not as learning for its own sake with an understanding of the reason as well as the language of what is studied from books, or as something that is to beget in the student's mind a longing after knowledge, making the getting of that knowledge its own reward. There is too much of the "useful" in the present system and too little of that which tends to improve and elevate not merely individual minds, but that of the whole race. Everything that is only useful is only relatively so, and therefore relatively useless.

(3) Another notorious evil which needs an early remedy is the refusal to acknowledge the intrinsic value of oriental learning and the indigenous sources of literature and research. The Madras University has been too long content to forget the importance of the oriental side of education or the national literature peculiar to this ancient land of men of letters, writers, and real *savants*, and too content with a foreign model so that the spirit of reform, if any in this direction,



has only tended to obliterate the characteristics of nationality and the rational methods viewed from the Indian standpoint. A scheme, for instance, to institute a separate degree on the oriental side of the Arts curriculum was recently framed on sensible lines with a more extended course and a more searching examination in the languages and literature of ancient India, combined, however, with a test in the elements of modern science studied not necessarily through the medium of English, which is swallowing up every other language and leaves very little time for reflection; and these defects are mainly responsible for the artificiality of the foreign medium and methods. If the oriental side of the Arts course be extended, this artificiality and mere cramming of foreign words would gradually disappear in the keener interest and deeper reality, if not the wider range of teaching, at least in the case of the rising generation of Pandits and Moulvies as well as those members of the gentle sex and others who need suitable public tests of proficiency in vernacular classics as well as in Sanskrit, Arabic, and Persian, and in the sound oriental learning therein contained—tests applied in other than the medium of English. There is no reason why this deserving class of educated people should be surrounded by disabilities to share in University honours and why young Pandits and Moulvies trained and disciplined through other than the foreign medium should be denied all employment in the public service of their country, or left degraded as a lettered class of mendicants. But the scheme has been set aside by the advocates of the all-powerful English curriculum and the opponents of any teaching suited to the national instincts of the country, or a sound education in any sense of nationality or akin to national sentiment. It is some relief to find that the best friends of India including His Excellency the Viceroy are awake to the danger of the present aimless and cramming system of teaching everything exclusively in English and on foreign lines, and are also aware of the risk of national genius and national literature being squeezed out of India between the aggressive foreign tongue on the one side and the mania for passing examinations to get into the public service on the other. Is it not, therefore, right and proper, in the interests of true culture and original research for an Indian University, to keep national literature assiduously as the pole star in sight? If a system of liberal education is to take deep root in the Indian soil on lines parallel to the Western system, the University should adopt a determined attitude in favour of the oriental side of educational work and follow a definite policy of national education suited to the national instincts and the environments of this Eastern land. Let us not forget that the education of the upper and middle classes of the Indian community is the culture of moral and intellectual forces in the individual and in the whole race. Such forgetfulness forced upon by irresponsible men who think that the University has done all that could be expected of it, and who are content with the postponement policy from a religious prejudice or party spirit against the Indian tongues and the literature contained in them, has been the cause of the artificiality and comparative sterility of the present system of higher education in Colleges and High Schools controlled by the University, and has only tended to lower its aims and even suppress from this year forward the active methods of original composition in the mother tongue with something like pure native idiom and oriental richness of illustration in our Upper Secondary schools leading to the University. If the object of the State in regard to education in India is not to replace the national tongues and to denationalize or anglicize all young students in every direction of intellectual work, it ought to encourage a section at least of the student population to study the classical languages and ancient writings and thoughts of their own country free from an English tinge, and make the University a field of culture of sufficient extent for the national mind to expand in literature, science, and art, and thus to maintain the old prestige of the Hindu and Mahomedan communities for learning and culture on indigenous lines as far as possible. If India is to be “anglicized,” she will perhaps cease to be India, but she will certainly never become an England.

It is unnecessary to expatiate further on this subject, but I would respectfully invite the attention of the Commission to a full report to be found in the archives of the local University setting forth the standards and subjects for the several grades of examinations for a degree in oriental learning and to the arguments for the extension of the University system of education on the oriental



side; and I cannot conclude this part of my statement better than by quoting the appended extracts from a Report of David Duncan, Esq., D.Sc., LL.D., the late Director of Public Instruction, on the expediency of instituting a higher examination in oriental languages.

Another practical reform urgently needed has reference to too many failures at the examinations of the University. This is caused not by the syllabuses laid down and the percentages demanded for a pass, but by the mode of teaching and the system of cramming boys of ten or twelve years of age for the Matriculation Examination, which has been mostly abused by the affiliated High Schools leading up to the University. There seems to be only one mode of reducing the excessive numbers admitted for this examination and checking the evils of a want of sufficient time for proper mental training and sufficient capacity to assimilate the knowledge imparted in the secondary schools; and the simple remedy I would suggest is the insertion of an age-limit in the bye-law relating to the admission of candidates to the Matriculation Examination. It is desirable to insert in bye-law 132 of the Madras University Regulations an age-limit for admission of any candidate to the Matriculation Examination, and this bye-law might read thus:—

“No candidate shall be registered unless he has completed his fifteenth year and previously paid a fee, etc.”

The cause of the excessive numbers that appear for this examination in this Presidency is that it is in one respect a leaving examination and a test for admission to the public service; but no minor is fit to enter the Government service or any service before he reaches his majority. It would therefore be no disadvantage to any one if boys below 15 years of age be shut out of the Matriculation Examination and driven to bring steadier, freer, and more intelligent and invigorating methods of study to bear upon their school work in their Upper Secondary course and come up better prepared to pass a good examination once for all. This limitation of age would go a great way to reduce what is now an unmanageable number of candidates and discreditable failures, and check other evils that imperil the health of body, mind, and the eye-sight of the youths of the country, if not their lives.

*Extract from a Report of D. Duncan, Esq., D.Sc., LL.D., late Director of Public Instruction, Madras.*

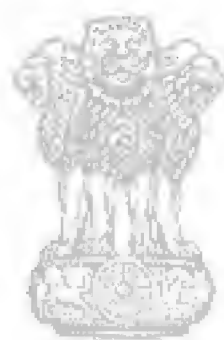
It is very essential, in the interest of instruction in the oriental classics and the vernacular languages of this Presidency and with a view to encourage young men of a linguistic turn of mind to aim at a high standard of knowledge in the classical and vernacular language and literature, that suitable public tests of proficiency should be prescribed. It has been frequently said of late that there has been a gradual decline in the number of natives well versed in these languages, and this deterioration should, if possible, be checked and a healthy growth be fostered; otherwise the day is not far distant when sound oriental learning and vernacular teaching in our schools and colleges will have become things of the past.

\* \* \* \*

We cannot afford to ignore any means that will tend to make the vernacular languages a more ready, accurate, and flexible instrument, adapted to the conditions of modern life and fitted to convey to the masses of the people the rudiments of modern knowledge and to fix that knowledge in their minds as a permanent possession.

\* \* \* \*

It is necessary that every possible effort should be put forth, not only to prevent further degeneration in the languages of the people, but also to attempt gradually to enrich them by encouraging young and capable men to improve their knowledge of them.”



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## Copy of Memorandum forwarded to the Universities Commission.

### I

#### THE UNIVERSITY TO BE A TEACHING BODY.

The University of Madras is not an examining body merely. The teaching portion of the work is done by the Colleges affiliated to it. If the University were to enter upon the direct work of teaching that will seriously affect the existence of the many useful institutions now scattered throughout the Presidency. Madras, the seat of the University in the Presidency, cannot and ought not to be the only town where University education can be imparted and obtained. There are other large towns and centres in the Presidency where efficient teaching is and can be imparted. There of course cannot be uniformity of methods employed.

So far as the University of Madras is concerned I do not think it necessary that it should enter upon the direct work of teaching except it be for the encouragement of post-graduate study. The University might either establish a College for the purpose or appoint Professors to help graduates to carry on independent and original research or to qualify themselves for the M. A. degree. For the various Science Branches of the M. A. degree Laboratories may be provided. A well equipped Library open to all graduates of the University and all recognised Professors and Lecturers may also be provided.

### II

#### ELECTION OF FELLOWS.

No useful purpose is served by a large annual addition to the list of Fellows. The present strength is more than enough for all practical purposes. As vacancies occur Government may nominate besides high officials such others whose appointment may be an acquisition to the Senate.

As regards election of Fellows by the graduates of the University, the 20 years' limit in the case of Bachelors of Arts, Law, Medicine and Engineering should not I think be reduced. The voting strength is already inconveniently too large. A fee may with advantage be levied from all graduates and double the amount from graduates of 20 years' standing who wish to exercise this and other privileges that may be conferred on them by the University. Further restrictions as to qualifications of candidates for election as Fellows should be made so that all and sundry may not have the privilege of being voted for.

On the principle of representation it is desirable that the Head of every affiliated College, who is not already a Fellow, is appointed an Ex-officio Fellow of the Senate. I do not think however that every newly affiliated College should straightway be represented in the Senate. The privilege may be conferred, say, after 5 years. In the same way every newly appointed Head of an affiliated College need not be appointed a member of the Senate unless he took his degree if a Bachelor of Arts 10 years before his nomination, and if a Master of Arts 5 years. In this respect there should be no distinction made between graduates of Indian and those of European Universities.

### III

#### THE SYNDICATE.

There appears to me no need for the constitution and powers of the Syndicate being placed on a statutory basis. As the governing body of the University its powers are ample and sufficient. The present strength however may be slightly increased so as to admit of a few more Principals of First Grade Colleges being added to that body. If that is done the disability in the case of Moffusil Fellows being elected may well be removed. Provision must also be made for the interests of

Government and Private Institutions and those of Moffusil and Madras Institutions being well and equally represented.

#### IV

##### SUPERVISION OF AFFILIATED COLLEGES.

The Byelaws of the University provide for the inspection and supervision of the affiliated Colleges. At present all Second Grade Colleges aided by Government are inspected by the Government Inspector of Schools. His Inspection Report is reviewed by the Director of Public Instruction. The Annual Reports of First Grade Colleges are also reviewed by the Director. Copies of these reviews may be obtained by the University for information. Similar information regarding Colleges in Native States &c. may be obtained from the Heads of the Educational Departments concerned. A member of the Syndicate or the Registrar may inspect affiliated Colleges whenever the need for it arises to see if all the conditions of affiliation are duly observed.

#### V

##### THE PRESENT COURSES OF STUDY TO BE REVISED.

I do not believe that there is "a tendency of University Examinations to lower the aims and pervert the methods of education in Colleges". If so, the cure lies with the Boards of Examiners. Such a tendency must be due to the methods of teaching followed and not to the courses of study prescribed. The courses of study prescribed by the University are as good as can be laid down. They can be further improved. But no improvement in the courses of study can prevent the student from cramming unless his teacher is alive to the evils of it.

The general complaint is that the average Matriculate, and for that matter the average graduate, is very poorly informed. But the defect is due not to the courses of study prescribed but, in the majority of cases, to the absence of culture in the home. The work done in the School or in the College is not supplemented at home. The acquaintance that the average student makes of men and things for 4 or 5 hours in the day in the class room is therefore found inadequate. English, which is a foreign language to the vast majority, is only spoken for a few hours in the day, and confined to the class room. In these circumstances facility to express oneself in English is not easily acquired.

I do not think that the addition of an Honours Course for the B. A. degree is at all necessary. The Examination for the M. A. degree is virtually the Honours Course of the University.

In conclusion I beg to add that the abolition of the University Matriculation Examination and the substitution of a school leaving certificate will be a great calamity. The evils now prevailing on account of certificates of fitness to enter upon a University course being indiscriminately granted to Matriculation candidates will be intensified tenfold: for there can be no guarantee that all Heads of schools will wisely and judiciously exercise the powers that may be conferred on them. I am moreover very doubtful if the abolition of the Primary and Lower Secondary Examinations conducted by the Educational Department will improve the quality of the University student. That, in my humble opinion, can only be improved if his environment is improved and if at the same time his Teacher is alive to his duties and responsibilities as an Educator.

WARDLAW COLLEGE  
BELLARY 21-2-1902.

J. P. Cotelingam,  
*Principal.*

## MEMORANDUM.

A. Crichton Mitchell, D. Sc. (Edin.), F.R.S.E., Formerly Assistant Professor and Examiner in the Natural Philosophy Department, Edinburgh University, Principal and Professor of Pure and Applied Mathematics, His Highness Maharajah's College, Trivandrum.

### MATHEMATICS AND PHYSICS IN THE MADRAS UNIVERSITY.

The prominent evils of the present system may be summarized as follows :—

(1) *Imperfect general education of those who have passed the Matriculation Examination.*—This shows itself in various ways, but the following are the most noticeable:—Imperfect acquaintance with English; inability to use English with reasonable approach to idiomatic correctness; bad English composition; an improper understanding of the principles of Mathematics, Chemistry, and Physics; consequent inability to apply the facts already known to the further study of these subjects; a lack of knowledge of things in general.

Such results are not the fault of the Matriculation Examination: they are almost entirely due to bad teaching in High Schools.

(2) *The antiquated character of the Syllabuses for the F.A., B.A. and M.A. Examinations.*—All the syllabuses in Mathematics are many years behind the time. In *Algebra*, the fundamental laws and principles are not prescribed, and in consequence are seldom taught. For the F.A. Examination many portions are omitted and the student is carried on to the higher parts without understanding the lower. The syllabus in this subject for the B.A. is worse, and the student has to go through Analytical Geometry and the Calculus with a knowledge of Algebra which is sadly incomplete. For the M.A. there is no detailed syllabus and examiners go more by precedent than anything else. In consequence any examiner who wishes to introduce new matter, or to raise the standard by setting a more advanced paper, is generally defeated at the meetings of the Board of Examiners. In Geometry matters are worse. Practically there is no departure allowed from the stereotyped methods which were discarded a quarter of a century ago in England. There is still a blind devotion to Euclid's enunciations, Euclid's sequence of propositions, Euclid's proofs, and even in many cases to Euclid's wording of a proof. What is prescribed and taught is Euclid, not Geometry. In *Analytical Geometry*, some of the most important modern developments, which are of great value, are altogether excluded for no apparent reason. In the Differential Calculus the course is prescribed by reference to portions of a book published many years ago and which is not now used by any teacher who knows his subject. Partial differentiation, the most important part of the subject in its extensive applications to Physics, is wholly excluded. The integral calculus is not prescribed for the B.A. In the different subjects included under Applied Mathematics, both B.A. and M.A. courses are hopelessly behind the time.

There is a very fair agreement among the mathematical teachers of the Presidency that recent years have witnessed a very decided decline in mathematical talent as compared with what was seen in the earliest years of the Madras University. This is exactly what might be expected after nearly a generation of wrongly directed teaching.

Experimental Physics is at present only taught in the B.A. course. It is also one of the optional subjects for the M.A. Degree. Here it is not so much the syllabus that is faulty as that the standard is low. Still the syllabus is capable of considerable improvement.

(3) *The low standard of attainment required for a degree in either Mathematics or Physics.*—The question of standard is one which can only be viewed comparatively. The youth who enters a British University from the modern

side of a public school is, so far as Mathematics and Physics are concerned, on a higher level than the student in Madras who has passed the F.A. Both preparing for a Mathematical degree, the former will, in the next two years, get over nearly three times as much work as the latter. Yet the Madras student can get his degree at the end of that time while the student in England is still a year at least from graduation. It is in this respect that the standard is low.

The lowness of standard is due to many causes, but chiefly to the fact that the amount of English and Vernacular which has to be studied simultaneously with an optional science prevents a high standard in the latter, if not in all.

The standard is much lower in Physics than in Mathematics, and evidence of this is not difficult to find. Almost any of the B.A. papers in Physics will illustrate it. A very glaring instance of the low standard required for the M.A. in Physics is afforded by the papers published in the University Calendar for 1901-1902, Volume III, pages 284-286. Of the three papers in Experimental Physics, only one (Jan. 21 10-1) approaches a respectable standard. The other two could be answered by any intelligent student who had completed the B.A. course. The practical examination held at the same time was of a disgracefully low standard. From my experience as an Assistant Professor and Examiner in Physics in the University of Edinburgh I have no hesitation in stating that almost any student, working in a Physical Laboratory one hour daily for five months, could do the M.A. Practical Physics with ease. Again, a candidate for M.A. in Physics is not expected, as is the case in other subjects, to submit a thesis or dissertation showing original research. As a general result, the degree is not the mark of special ability which it ought to be.

The present low standard in the B.A. II A Physics is chiefly due to there being no practical instruction or practical examination.

I venture to submit the following as suggestions for improvement:

(1) *Constitution of the University*.—The present Senate to be dissolved. A new Senate to be created, including—

- (a) Members of the Council of Fort Saint George.
- (b) Judges of the High Court and the Law Officers of the Crown.
- (c) Surgeon-General, Madras.
- (d) Director of Public Instruction, Madras.
- (e) Principals of First Grade Colleges and Professional Colleges.
- (f) Professors of First Grade Colleges and Professional Colleges.
- (g) Specialists, such as the Government Astronomer, Government Botanist, Chemical Examiner to Government, representatives of the Geological Survey, Archæological Survey, Public Works.
- (h) Graduates who have taken a specially high degree and who are engaged in, and have published original scientific, historical, or philological work.

There should be no election by graduates, only appointment by the Governor in Council. There should be no restriction to the term of Fellowship, which should only be terminated by final departure from India, vacation of office, or by special circumstances in which the Governor in Council might see fit to cancel the appointment.

The Senate should have more than one statutory meeting annually, and these should be held at times convenient to the majority of Fellows.

The Boards of Studies should certainly be amalgamated with the Boards of Examiners, and should consist, in each subject, of those professors engaged in teaching the subject. Alterations in detail of a syllabus or in the minor arrangements of an examination should be made when necessary by the Board of Studies, and be merely confirmed by the Senate.

2. *Affiliation of Colleges*.—The number of second grade colleges should be reduced by the abolition of those (they are numerous) which are not sufficiently staffed and equipped. Much greater attention should be paid to the qualifications of the staff of colleges,

3. *Courses of instruction for degrees.*—The following alternative proposals for courses of instruction involving a higher standard might be considered :—

I. First Arts Examination to consist of—

- (a) English language and composition.
- (b) A Classical or Vernacular language.
- (c) Any two of the following :—

Mathematics.

Chemistry.

Physics.

Biology and Geology.

Logic.

History.

II. Bachelor of Arts Degree Examination (presuming the whole collegiate course is to extend over four years, as at present, and that no separate Science degree is to be instituted) to consist of—

- (a) English Language, Literature, and Composition.
- (b) Any two of the following subjects, one elementary and the other advanced :—

A Classical Language.

Mathematics, Pure and Applied.

Chemistry.

Experimental Physics.

Botany and Zoology.

Geology and Mineralogy.

Logic, Ethics, and Psychology.

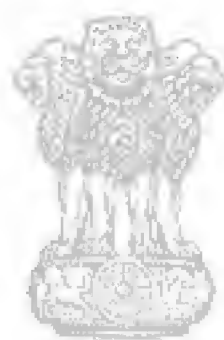
History.

Economics.

III.—The course of instruction after the F.A. might, and should, be extended to three years, and if this be done a course similar to II above might be adopted with a correspondingly higher standard.

IV.—The courses of instruction in Mathematics, Physics, Chemistry and Biology will never be on a proper footing unless and until a separate Science Degree is instituted. On three occasions has a measure to this effect been laid before the Senate, but on each occasion it has been thrown out, chiefly through the systematic opposition of the missionary party, who, with two or three honourable exceptions, are utterly ignorant of science and scientific education. At the same time they have a predominance in the councils of the University, altogether out of proportion to the value of the work they do, which enables them to defeat any measure of University reform to which they (or rather, their leaders) object.

4. *A Teaching University.*—If any move be made in the direction of making the Madras University a teaching University, it should not be forgotten that there are Colleges other than those in Madras which are quite capable of undertaking such work. At the Trivandrum College we would welcome any change which would necessitate more advanced instruction. Our staff is quite competent to teach for *any* degree which is likely to be instituted in English Language and Philology, Sanskrit, History, Economics and Chemistry. Within two years we will have one of the best equipped Physical Laboratories to be found out of Europe and America, and be fully prepared to teach Experimental Physics up to *any* standard which may be prescribed. The College Library has nearly 5,000 volumes and is supported by an annual grant of nearly £100, besides special occasional grants.



सत्यमेव जयते



Arthur W. Bishop, Ph. D. (Munich), Professor of Chemistry,  
H. H. Maharajah's College, Trivandrum.

CHEMISTRY IN THE MADRAS UNIVERSITY.

Chemistry is taught in most of the High Schools in the same manner as other book subjects. Very few experiments are performed, although almost all the experiments that should be shown are of the most simple character, both as regards chemicals and apparatus. This error of omission is almost the worst that can be committed when the whole object of the inclusion of Chemistry is presumably to give the student some knowledge of materials—of the material world.

The answers in the examinations are too frequently in the words of the text-book or of dictated notes and show that the candidates have not derived their knowledge from personal observation. It is generally found that questions involving the observation of experiments are badly answered; hence it is that in some years an enormous number of failures occur in Chemistry, which occurrence is generally attributed to the severity of examiners or to the unsuitability of the subject, instead of to its true cause—bad teaching. All this could have been remedied in great measure long ago by the withholding of grants-in-aid to High Schools offending in this respect, on the report of an Inspector with a European Science degree.

The chief defect here lies in my opinion in the syllabus—with the present arrangement of F.A. and B.A. The students have to take up English and Vernacular at the same time. Only a portion therefore of the two years is available. Since no attempt can obviously be made to teach the whole of Chemistry, great care should be exercised in drawing up the syllabus, so that Theoretical Chemistry, Descriptive Chemistry (as much of the present Theoretical Chemistry should be termed), and Practical Chemistry are properly represented. At present the syllabus is antiquated and out of proportion and at the same time so extensive, that no attempt can be made to cover the whole of it in the prescribed time and in a proper and modern manner. In my opinion it should be possible at any time for those teaching and examining in such a subject as Chemistry to make alterations in the syllabus that do not alter the specific character of the examination in a less cumbrous manner than at present. In any case, such a syllabus should be revised periodically, for owing to advances in the science and methods of teaching in Europe parts of the subject change their relative value.

In conclusion, my point is that, although from the nature of the case the Chemistry in the B.A. must be comparatively elementary, it should be made representative of the Science and be taught in the most modern manner and this necessitates the careful framing of the syllabus and its revision from time to time.

The standard of this degree, representing as it does the highest degree with Chemistry as its chief subject, is far too low, or perhaps it would be better to say that the syllabus is not properly representative. As in the B.A. the syllabus is defective and antiquated. In my opinion the highest degree in such a subject as Chemistry should only be conferred on those whose work in a recognised laboratory for at least two years has been carefully recorded and supervised. A practical examination in such a subject is a farce unless the whole of the laboratory work done by the candidate be also taken into account. I also think that a dissertation on some part of Chemistry should be required as is the case at present in the M.A. for Philosophy, History, Biology, and Philology.

The present Boards of Studies, to judge from the one (Physical Science) to which I am attached, are inactive. I have not received any communication of any kind whatsoever since I was appointed three years ago.

With the present arrangement of B.A. and M.A., the Science Optionals can be much improved by the revision of the syllabuses from time to time. The standard of the Science examinations could be raised by the omission of Vernacular for the B.A. and by more English being taught for the F.A., even if some of the other subjects were omitted.

If, however, Science is to take the place that Science should in a modern University, degrees in Science must certainly be instituted. These degrees should, in my opinion, be conferred on those who have studied subjects in much the same manner as at present obtains in the University of Edinburgh.

I see no reason why such studies should be confined to Madras: it should depend upon the staff of the College and its equipment.

In the event of the institution of such degrees in Science, the present M.A. courses in Chemistry and Physics should in my opinion be abolished either at once or after a few years.

ARTHUR W. BISHOP.



Dated Bangalore, the 5th March 1902.

From—A. J. GRIEVE, Esq., B. A. (Oxon. et Lond.), Professor of English in the Central College, Bangalore, formerly Registrar of the University of Madras,

To—The HONOURABLE MR. T. RALEIGH, M.A., etc., etc., etc., President of the Indian Universities Commission.

I have for some time thought of contributing to the discussion on University Reform, but a diffidence arising from the shortness of my experience in India combined with the pressure of college work has prevented my doing so until now. I cannot hope that my suggestions will carry much weight, but I give them for what they are worth, and trust that they will arrive before your discussions terminate.

There is no doubt that the tendency at home is in favour of multiplying the number of Universities, and of giving each University, as far as may be, a distinctive character. We see the tendency at work in Birmingham; in Liverpool, Manchester and Yorkshire (the Victoria University); and in Ireland. I should not be surprised if the other and newest example of a 'Sprawling' University—that of Wales (though here there is a certain community of interest between the Colleges—were soon to follow suit; and I venture to predict that before very long there will be Universities at Bristol (University College), at Southampton (Hartley College) and at Nottingham (University College).

I do not think we are in a position to multiply Universities at this rate in India just yet, but we have to look at days to come, and something perhaps may even now be done towards it. The example that occurs most readily to me is, of course, the fusion of the Colleges at Mysore and Bangalore into one strong institution at Bangalore which might become a University on the Scotch or German or new English (Birmingham, etc.) model. Then again the establishment of a University in the Central Provinces would ease the pressure on Madras (by drawing off the Nizam's Dominions), Bombay, Calcutta and Allahabad.

I am of those who hold that the Universities of India as at present constituted are not "Teaching Universities."

The members of their governing bodies do not directly—many of them do not at all—represent either the Colleges which fall within their respective zones of influence, or educational interests at all. But I suggest that the Universities may become 'Teaching Universities' by the expedient—I hesitate to say simple—of substituting incorporation for affiliation. I think that what are known as First Grade Colleges (the number may be reduced—or enlarged) and of course the Professional Colleges might become integral parts of their respective Universities. I do not think it matters much that any particular College may not be equipped for teaching *every* course of study\*: students all the world over go to those institutions which can give them what they are in search of, and the different Colleges would become associated, at least as much as they are now with different studies linguistic, philosophical, historical or scientific.

The "Second Grade" Colleges should gradually be pushed back (the distance would not often be great) to the high school stage from which they have emerged. Many of them are managed by missionary agencies, and I say frankly that in my opinion the missionary can render no greater service to the country, educationally, than by devoting himself to the systematized and thorough grounding of high school boys (1) in English, (2) in outlook or observation and scientific method, (3) in morality; and thus furnish the University Colleges with material superior to that which at present matriculates.

As regards the governing bodies of the Universities, I think the term *Fellows* should be abolished in this connection as being both misleading and mischievous. The Colleges might have their own fellowships.

At Madras I would have a Senate or University Court not exceeding seventy members—25 appointed by His Excellency the Governor in Council, 25 by the managing bodies of the constituent Colleges, 12 by the body (=guild or congregation or convocation) of registered graduates, together with certain *ex-officio* members and the Vice-Chancellor and Chancellor.

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\* At present in the University of Madras a First Grade College needs to be affiliated only in one or more of the Science Courses. No requirements are demanded in the case of English or the Second Language!

The members of the Senate or Court might be appointed for 4 (or 6) years, half of them retiring every 2 (or 3) years. In this case half of those first elected would retire after 2 (or 3) years.

I do not think that membership should be forfeited for non-attendance. The percentage at Madras compares not unfavourably with that at home and would improve after the elimination of the non-educationists. The Senate should meet statutorily more than once a year; twice a term would be better.

The Syndicate (not the choicest of terms in this connection: 'Executive' or 'Standing Committee' would be preferable perhaps) I would leave unchanged. It is certainly large enough, but I would have it meet every week in term. If it is made statutory, I should deprecate the introduction of the terms or ideas of 'departmental' and 'aided.' These seem to me matters for the Colleges in their relations with Government through the Directors of Public Instruction, not in their relation to the Universities. If necessary, the election of the Syndicate might be subjected to confirmation by His Excellency the Governor in Council.

Matriculation is and must always remain a University function, though any examination connected with it might be undertaken by the Colleges. If the University itself continues to examine for matriculation, I think the examination should be confined to a very strong test in English (*e.g.*, set books of Shakespear and Milton, translation from vernacular, essay and grammar, and *vivâ voce*) and a fair test in Mathematics. I believe many good authorities at home are utterly opposed to the teaching of Science in schools.

No candidate should matriculate before the age of 16. Matriculation should not be a test for Government service.

The constitution of Faculties and Boards of Studies might remain as at present.

I should like to see a connection between the University and the School of Arts.

I am not averse from the establishment of Schools of Theology, but as there does not seem as yet to be a very widespread demand for them, I think the Serhampore Charter might be revived: Serhampore might become a kind of Lampeter, the well known College in Mid-Wales which has the unique privilege of granting the degrees of B.A. and B.D.

So long as the Colleges connected with the different Universities are so scattered, I do not think the suggested establishment of University Professors has much to recommend it. But for M.A. courses in the Presidency cities I think a system of inter-collegiate lectures would be both desirable and feasible.

We certainly ought to have degrees in Science at Madras, but this and the question of Honour courses are rather matters which have to be settled by the Senate of the University concerned.

The fostering of a genuine University life in our large towns will be for many reasons a heavy task. Oxford and Cambridge are unique and even there a man divides his affections between his University and his College. One cannot love an abstraction like the old University of London (nor will the new one be much better in this respect) or the present Indian University. But one can love one's University if it be self-contained as at Edinburgh or Heidelberg, just as one loves one's college whether it be at Aberystwyth, or at Oxford or at Madras. The hostels are doing something (how much it is perhaps too soon to say: I think there is hardly enough tutorial residence) towards developing a healthy college life. Athletic Associations and contests, common work in inter-collegiate laboratory courses and lectures will do something of the kind for the *University*. But in a large city where the educational interest is not all-dominant, but simply one of many interests, the growth of a University *Societas*, especially when it has to contend against retarding influences of a specifically Indian character, will necessarily be a long and slow process, though it may be well quickened along the lines I have laid down.

I have the honour to apologize for troubling you, Sir, with this memorandum.